

## CLAIMS

What is claimed is:

1. A helmet assembly of an air filtration system for mounting to a head of a user to distribute air about the head of the user, said assembly comprising:
  - 5 an inner structural shell;
  - an outer structural shell extending from said inner structural shell to define at least one air flow channel between said inner and outer shells for channeling air about the head of the user;
  - a fan module mounted to at least one of said inner and outer shells; and
  - 10 a scroll housing mounted adjacent said fan module and including at least one air inlet and at least two air outlets, said fan module drawing air into said air inlet of said scroll housing and distributing air out of said scroll housing through said air outlets and into said air flow channel for distributing air about the head of the user.
2. An assembly as set forth in claim 1 wherein said scroll housing further
  - 15 includes a base portion and an outer wall circumferentially extending around said base portion.
3. An assembly as set forth in claim 2 wherein said outer wall of said scroll housing is partitioned to define said at least two air outlets.
4. An assembly as set forth in claim 3 further including a base section having a
  - 20 front section and a rear section, and a facial section extending from said base section to define a facial opening.
5. An assembly as set forth in claim 4 wherein said inner and outer shells extend between said front and rear sections of said base section to define said air flow

channel.

6. An assembly as set forth in claim 5 further including a front air exit disposed at said front section of said base section for distributing air from said air flow channel toward a front of the head of the user, and a rear air exit disposed at said rear  
5 section of said base section for distributing air from said air flow channel toward a back of the head of the user.

7. An assembly as set forth in claim 6 wherein said at least two air outlets of said scroll housing are in fluid communication with said front and rear air exits to distribute air toward the front and back of the head of the user, respectively.

10 8. An assembly as set forth in claim 7 wherein said inner and outer shells converge toward said front section of said base section to define said front air exit.

9. An assembly as set forth in claim 8 further including an air deflection angle defined by said outer shell angling toward said inner shell at said front air exit for proper deflection of air toward the front of the head of the user.

15 10. An assembly as set forth in claim 9 wherein said air deflection angle is greater than zero.

11. An assembly as set forth in claim 9 wherein said air deflection angle is between 25 – 35 degrees.

12. An assembly as set forth in claim 4 further including an intake grid mounted  
20 to said outer shell, said intake grid adapted for use with a gown that covers said base section and operates as a filter medium to filter air drawn into said scroll housing.

13. An assembly as set forth in claim 12 wherein said intake grid further includes a top surface spaced from said outer shell for retaining the filter medium away

from said outer shell and said fan module.

14. An assembly as set forth in claim 13 wherein said intake grid is contoured to said outer shell between said front section and said rear section of said base section to maximize an effective intake area for the filter medium to filter air drawn into said scroll housing.

15. An assembly as set forth in claim 14 further including dissipation cavities disposed at opposite lateral sides of said inner and outer shells, said cavities providing for increased air release from said air flow channel and from the user out through the filter medium.

16. An assembly as set forth in claim 6 wherein said inner shell further includes a cover surface and a rear facing, said cover surface and said rear facing extending to said outer shell at said rear section of said base section.

17. An assembly as set forth in claim 16 wherein said rear air exit is formed within said rear facing for distributing air from said air flow channel toward the back of the head of the user.

18. An assembly as set forth in claim 16 further including a mounting cavity between said cover surface and said outer shell at said rear section of said base section.

19. An assembly as set forth in claim 18 wherein said fan module and said scroll housing are integrally disposed within said mounting cavity at said rear section to minimize strain on the head the neck of the user.

20. An assembly as set forth in claim 19 wherein said fan module includes a fan for drawing air into said air inlet, and a motor for rotating said fan.

21. An assembly as set forth in claim 20 further including a power supply

powering said motor to rotate said fan.

22. An assembly as set forth in claim 21 wherein said power supply powers said motor through pulse width modulation.

23. An assembly as set forth in claim 20 wherein said fan is rotatably mounted  
5 to said base portion of said scroll housing within said outer wall for said fan to draw air into said air inlet of said scroll housing.

24. An assembly as set forth in claim 23 wherein said air inlet of said scroll housing is integrally formed within said outer shell for drawing air into said scroll housing.

25. An assembly as set forth in claim 24 further including a support pedestal  
10 protruding from said base portion, said fan rotatably mounted in said scroll housing on said support pedestal to draw air into said air inlet of said scroll housing.

26. An assembly as set forth in claim 25 wherein said motor is mounted within an underside of said support pedestal between said support pedestal and said cover portion of said inner shell.

15 27. An assembly as set forth in claim 12 wherein said facial section extending from said base section is further defined as a chin bar extending from said base section to define said facial opening and to maintain the gown away from the head of the user.

28. An assembly as set forth in claim 27 wherein said chin bar is flexible.

29. An assembly as set forth in claim 27 wherein said flexible chin bar is  
20 formed of plastic.

30. An assembly as set forth in claim 7 further including at least one air bleed valve disposed in said scroll housing to influence a volume of air flowing into said air flow channel from each of said at least two air outlets.

31. An assembly as set forth in claim 30 wherein said air bleed valve is disposed in said scroll housing to influence the volume of air flowing to said rear air exit to distribute air toward the back of the head of the user.

32. An assembly as set forth in claim 30 wherein said air bleed valve is  
5 mechanically controlled to manipulate the volume of air.

33. An assembly as set forth in claim 30 wherein said air bleed valve is electronically controlled to manipulate the volume of air.

34. An assembly as set forth in claim 1 wherein said inner and outer structural shells form said air flow channel from a two-sheet thermoforming process.

10 35. An assembly as set forth in claim 34 wherein each of said inner and outer structural shells include an outer periphery, said inner and outer shells being pinched together at said outer peripheries.

36. An assembly as set forth in claim 35 wherein said air flow channel is thermoformed between said pinched outer peripheries of said inner and outer shells.

37. An air filtration system for filtering air between a head and body of a user and an environment external to the user, said air filtration system comprising:

a helmet assembly adapted to be mounted on the head of the user and including a base section and a facial section, said base section of said helmet assembly further including an inner structural shell and an outer structural shell extending from said inner structural shell to define at least one air flow channel between said inner and outer shells for channeling the air about the head of the user;

a gown including a body portion for covering at least a portion of the body of the user and a head portion for covering said base section of said helmet assembly, said head portion of said gown operating as a filter medium to filter air between the user and the external environment;

a face shield mounted to said head portion of said gown to cover said facial section of said helmet assembly thereby permitting the user to view through said head portion of said gown;

a fan module mounted to at least one of said inner and outer shells of said helmet assembly; and

a scroll housing including at least one air inlet and at least two air outlets, said fan module drawing air into said air inlet of said scroll housing and distributing the air out of said scroll housing through said air outlets and into said air flow channel for distributing air about the head of the user.

38. An assembly as set forth in claim 37 wherein said fan module includes a fan for drawing air into said air inlet, and a motor for rotating said fan.

39. An assembly as set forth in claim 38 further including a power supply powering said motor to rotate said fan.

40. An assembly as set forth in claim 39 wherein said power supply powers said motor through pulse width modulation.

5 41. An assembly as set forth in claim 37 wherein said base section includes a front section and a rear section, and said facial section extends from said base section to define a facial opening.

42. An assembly as set forth in claim 41 wherein said face shield is mounted to said head portion of said gown to cover said facial opening to permit the user to view  
10 through said head portion of said gown and said facial opening of said helmet assembly.

43. An assembly as set forth in claim 41 further including a mounting cavity between said inner shell and said outer shell at said rear section of said base section.

44. An assembly as set forth in claim 43 wherein said fan module and said scroll housing are disposed within said mounting cavity at said rear section to minimize  
15 strain on the head and neck of the user.

45. An assembly as set forth in claim 37 further including an intake grid mounted to said outer shell such that said gown covers said intake grid to operate as said filter medium for filtering air drawn into said scroll housing.

46. An assembly as set forth in claim 45 wherein said intake grid further  
20 includes a top surface spaced from said outer shell for retaining said filter medium away from said outer shell.

47. An assembly as set forth in claim 46 wherein said intake grid is contoured to said outer shell between said front section and said rear section of said base section to

maximize an effective intake area for said filter medium to filter air drawn into said scroll housing.



48. A positioning and supporting system for assisting a single user in self-gowning as the user maintains sterility, said positioning and supporting system comprising:

a helmet assembly adapted to be mounted on a head of the user, said helmet assembly including a base section and a facial section extending from said base section to

5 define a facial opening;

a gown including a body portion for covering at least a portion of the body of the user and a head portion for covering said base section of said helmet assembly;

a face shield mounted to said head portion of said gown to cover said facial opening thereby permitting the user to view through said head portion of said gown, said face shield  
10 including a mounting mechanism on said face shield to support said face shield on said helmet assembly; and

said base section of said helmet assembly including a mounting device positioned relative to said facial opening, said mounting device interlocking with said mounting mechanism on said face shield to automatically center said face shield over said facial  
15 opening and to support said gown and said face shield thereby assisting the single user is self-gowning while maintaining a relative position between said gown and face shield and said helmet assembly as the user maintains sterility.

49. A system as set forth in claim 48 wherein said mounting mechanism is centered on said face shield.

20 50. A system as set forth in claim 49 wherein said mounting device is centered relative to said facial opening.

51. A system as set forth in claim 48 wherein said mounting mechanism of said face shield is further defined as an aperture, and said mounting device of said helmet

assembly is further defined as a mounting clip that interlocks with said aperture to automatically center said face shield over said facial opening and to support said gown.

52. A system as set forth in claim 48 wherein said mounting mechanism of said face shield is further defined as an aperture.

5 53. A system as set forth in claim 52 wherein said mounting device of said helmet assembly is further defined as a mounting clip, said mounting clip sized to releasably fit to said aperture to automatically center said face shield and to support said gown.

54. A system as set forth in claim 53 wherein said mounting clip extends  
10 upwardly from said base section away from said facial opening to support said face shield.

55. A system as set forth in claim 53 wherein said mounting clip includes a distal edge extending outwardly from said base section such that a portion of said face shield rests between said distal edge and said base section after said face shield is mounted to said mounting clip to support said gown.

56. A helmet assembly adapted to be utilized with a positioning and supporting system having a gown and a face shield wherein said helmet assembly assists a single user in self-gowning as the user maintains sterility, said assembly comprising:

a base section;

5 a facial section extending from said base section to define a facial opening for receiving the face shield; and

said base section including a mounting device positioned relative to the facial opening, said mounting device being adapted to interlock with the face shield to automatically center the face shield over said facial opening and to support the gown and  
10 the face shield thereby assisting the single user in self-gowning while maintaining a relative position between the gown and face shield and said base section as the user maintains sterility.

57. An assembly as set forth in claim 56 wherein said mounting device is centered relative to the facial opening.

15 58. An assembly as set forth in claim 56 wherein said mounting device of said base section is further defined as a mounting clip that is adapted to protrude through the face shield to automatically center the face shield and to support the gown.

59. A system as set forth in claim 58 wherein said mounting clip extends upwardly from said base section away from said facial opening to support the face shield.

20 60. A system as set forth in claim 58 wherein said mounting clip includes a distal edge extending outwardly from said base section such that a portion of the face shield rests between said distal edge and said base section after the face shield is mounted to said mounting clip to support the gown.

61. A helmet assembly of an air filtration system for controlling a volume of air flowing into the air filtration system and for providing audible indication of a minimum and a maximum volume of air to a user, said assembly comprising:

an inner structural shell;

5 an outer structural shell extending from said inner structural shell to define at least one air flow channel between said inner and outer shells for channeling air about the head of the user;

a fan in fluid communication with said air flow channel for drawing air into said air flow channel;

10 a motor having an output operatively connected to said fan to drive said fan at a plurality of rotational speeds correlating to the volume of air flowing into said air flow channel;

a power supply selectively activated and deactivated to affect said output of said motor; and

15 a controller that selectively activates and deactivates said power supply at an activation rate having a frequency audible to the user for providing audible indication of the minimum and the maximum volume of air to the user.

62. An assembly as set forth in claim 61 further including first and second motor controls extending from said outer shell, said first motor control responsive to  
20 manipulation by the user for increasing the rotational speed of said fan, and said second motor control responsive to manipulation by the user for decreasing the rotational speed of said fan.

63. An assembly as set forth in claim 62 wherein said first and second motor

controls are first and second push-buttons, respectively.

64. An assembly as set forth in claim 63 wherein one of said first and second push-buttons extend from said outer shell at a height that varies from the other of said first and second push-buttons to assist the user in manipulation.

5 65. An assembly as set forth in claim 62 wherein said plurality of rotational speeds is further defined as a first rotational speed correlating to a first volume of air, a second rotational speed correlating to a second volume of air, a third rotational speed correlating to a third volume of air, a penultimate rotational speed correlating to a penultimate volume of air, and a last rotational speed correlating to a last volume of air.

10 66. An assembly as set forth in claim 65 wherein the first volume of air is the minimum volume of air flowing into said air flow channel, and the last volume of air is the maximum volume of air flowing into said air flow channel.

67. An assembly as set forth in claim 66 wherein said frequency of said activation rate is audible when the user manipulates said first motor control to increase the  
15 rotational speed of said fan from the penultimate rotational speed to the last rotational speed of said fan.

68. An assembly as set forth in claim 67 wherein said frequency of said activation rate is audible when the user manipulates said second motor control to decrease the rotational speed of said fan from the second rotational speed to the first rotational speed  
20 of said fan.

69. An assembly as set forth in claim 61 wherein said controller selectively activates and deactivates said power supply through pulse width modulation.

70. An assembly as set forth in claim 61 further including a set point indicative

of one of said plurality of rotational speeds.

71. An assembly as set forth in claim 70 wherein said controller further includes a memory that retains said set point when said power supply is deactivated.

72. ~ An air filtration system for filtering a volume of air flowing into said air filtration system between a head and body of a user and an environment external to the user and for providing audible indication of a minimum a maximum volume of air to the user, said air filtration system comprising:

5           a helmet assembly adapted to be mounted on the head of the user and including a base section and a facial section, said base section of said helmet assembly further including an inner structural shell and an outer structural shell extending from said inner structural shell to define at least one air flow channel between said inner and outer shells for channeling the air about the head of the user;

10           a gown including a body portion for covering at least a portion of the body of the user and a head portion for covering said helmet assembly, said head portion of said gown operating as a filter medium to filter air between the user and the external environment;

            a face shield mounted to said head portion of said gown to cover said facial section of said helmet assembly thereby permitting the user to view through said head portion of  
15   said gown;

            a fan in fluid communication with said air flow channel for drawing air into said air flow channel of said helmet assembly;

            a motor having an output operatively connected to said fan to drive said fan at a plurality of rotational speeds correlating to the volume of air flowing into said air flow  
20   channel;

            a power supply selectively activated and deactivated to affect said output of said motor; and

            a controller that selectively activates and deactivates said power supply at an

activation rate having a frequency audible to the user for providing audible indication of the minimum and the maximum volume of air to the user.

73. A system as set forth in claim 72 further including first and second motor controls extending from said outer shell, said first motor control responsive to manipulation by the user for increasing the rotational speed of said fan, and said second motor control responsive to manipulation by the user for decreasing the rotational speed of said fan.

74. A system as set forth in claim 73 wherein said plurality of rotational speeds is further defined as a first rotational speed correlating to a first volume of air, a second rotational speed correlating to a second volume of air, a third rotational speed correlating to a third volume of air, a penultimate rotational speed correlating to a penultimate volume of air, and a last rotational speed correlating to a last volume of air.

75. A system as set forth in claim 74 wherein the first volume of air is the minimum volume of air flowing into said air flow channel, and the last volume of air is the maximum volume of air flowing into said air flow channel.

76. A system as set forth in claim 75 wherein said frequency of said activation rate is audible when the user manipulates said first motor control to increase the rotational speed of said fan from the penultimate rotational speed to the last rotational speed of said fan.

77. A system as set forth in claim 76 wherein said frequency of said activation rate is audible when the user manipulates said second motor control to decrease the rotational speed of said fan from the second rotational speed to the first rotational speed of said fan.



78. A system as set forth in claim 72 wherein said controller selectively activates and deactivates said power supply through pulse width modulation.

79. A helmet assembly of an air filtration system for mounting to a head of a user to minimize strain on the head and neck of the user, said assembly comprising:

a structural shell having a front section and a rear section;

a rear support rigidly extending from said rear section of said structural shell,

5 an adjustment segment having first and second sides;

a strap flexibly connected to and extending from said front section of said structural shell, said strap including a first end disposed within said first side of said adjustment segment, and a second end disposed within said second side of said adjustment segment; and

10 an adjustment device mounted to said adjustment segment and engaging said first and second ends of said strap to manipulate said first and second ends toward each other to tighten said strap and to pull said strap from said front section as said rear support remains fixed relative to said rear section and said strap, and to manipulate said first and second ends away from each other to loosen said strap and to push said strap toward said front  
15 section as said rear support remains fixed relative to said rear section and said strap.

80. An assembly as set forth in claim 79 wherein said first end is movably disposed within said first side of said adjustment segment and said second end is fixedly disposed within said second side of said adjustment segment.

81. An assembly as set forth in claim 79 wherein said first end is fixedly  
20 disposed within said first side of said adjustment segment and said second end is movably disposed within said second side of said adjustment segment.

82. An assembly as set forth in claim 79 wherein said first end is movably disposed within said first side of said adjustment segment and said second end is movably

disposed within said second side of said adjustment segment.

83. An assembly as set forth in claim 79 wherein said adjustment segment is mounted to said rear support.

84. An assembly as set forth in claim 79 wherein said rear support integrally  
5 includes said adjustment segment.

85. An assembly as set forth in claim 79 wherein said strap further includes a frontal portion disposed between said first and second ends and opposite said adjustment segment.

86. An assembly as set forth in claim 85 further including at least one hinge  
10 extending from said frontal portion of said strap to flexibly connect said strap to said front section of said structural shell.

87. An assembly as set forth in claim 86 further including a gap defined between said frontal portion of said strap and said front section of said structural shell.

88. An assembly as set forth in claim 87 wherein said at least one hinge flexes  
15 to increase said gap as said strap is tightened by said adjustment device.

89. An assembly as set forth in claim 88 wherein said at least one hinge relaxes to decrease said gap as said strap is loosened by said adjustment device.

90. An assembly as set forth in claim 79 wherein said adjustment segment of said rear support defines an adjustment aperture that receives said first and second ends of  
20 said strap.

91. An assembly as set forth in claim 90 wherein said adjustment device is further defined as an adjustment knob rotatably mounted from and extending into said adjustment aperture to engage said first and second ends of said strap.

92. An assembly as set forth in claim 91 wherein said adjustment knob includes a pinion extending into said adjustment aperture.

93. An assembly as set forth in claim 92 wherein said first end of said strap includes a first rack and said second end of said strap includes a second rack, said pinion of  
5 said adjustment knob extending into said adjustment aperture to engage said first and second racks upon rotation of said adjustment knob.

94. An assembly as set forth in claim 93 wherein said adjustment knob further includes an inner surface facing said rear support, said inner surface including a plurality of teeth.

10 95. An assembly as set forth in claim 94 further including a flexible support bar extending from said rear support, said support bar including at least one locking detent mating with said teeth of said adjustment knob to lock said strap relative to said rear support.

96. An assembly as set forth in claim 95 wherein said flexible support bar flexes  
15 to disengage said detent from said teeth of said adjustment knob upon manipulation of said adjustment knob such that said strap is allowed to move relative to said support.

97. An assembly as set forth in claim 79 further including a fan module and a scroll housing disposed adjacent said rear section of said structural shell.

98. An air filtration system for filtering air between a head and body of a user and an environment external to the user and for minimizing strain on the head and neck of the user, said air filtration system comprising:

5 a helmet assembly adapted to be mounted on the head of the user and including a structural shell having a front section and a rear section;

a gown including a body portion for covering at least a portion of the body of the user and a head portion for covering said helmet assembly, said head portion of said gown operating as a filter medium to filter air between the user and the external environment;

10 a face shield mounted to said head portion of said gown to cover a section of said helmet assembly thereby permitting the user to view through said head portion of said gown;

a rear support rigidly extending from said rear section of said structural shell,

an adjustment segment with first and second sides;

15 a strap flexibly connected to and extending from said front section of said structural shell, said strap including a first end disposed within said first side of said adjustment segment, and a second end disposed within said second side of said adjustment segment; and

20 an adjustment device mounted to said adjustment segment and engaging said first and second ends of said strap to manipulate said first and second ends toward each other to tighten said strap and to pull said strap from said front section as said rear support remains fixed relative to said rear section and said strap, and to manipulate said first and second ends away from each other to loosen said strap and to push said strap toward said front section as said rear support remains fixed relative to said rear section and said strap.

99. An assembly as set forth in claim 98 wherein said first end is movably disposed within said first side of said adjustment segment and said second end is fixedly disposed within said second side of said adjustment segment.

100. An assembly as set forth in claim 98 wherein said first end is fixedly disposed within said first side of said adjustment segment and said second end is movably disposed within said second side of said adjustment segment.

101. An assembly as set forth in claim 98 wherein said first end is movably disposed within said first side of said adjustment segment and said second end is movably disposed within said second side of said adjustment segment.

102. An assembly as set forth in claim 98 wherein said adjustment segment is mounted to said rear support.

103. An assembly as set forth in claim 98 wherein said rear support integrally includes said adjustment segment.

104. A helmet assembly of an air filtration system for mounting to a head of a user to distribute air about the head of the user, said assembly comprising:

an inner structural shell;

an outer structural shell extending from said inner structural shell to define at least one air flow channel between said inner and outer shells for channeling air about the head of the user;

at least two helmet air exits for distributing air from said air flow channel toward the head of the user; and

a fan module mounted to at least one of said inner and outer shells and including at least one air inlet and at least one air outlet, said fan module drawing air in through said at least one air inlet and distributing the air out through said at least one air outlet into said air flow channel and to said at least two helmet air exits.

105. An assembly as set forth in claim 104 further including a base section having a front section and a rear section.

106. An assembly as set forth in claim 105 wherein said at least two helmet air exits are further defined as a first and second helmet air exits.

107. An assembly as set forth in claim 106 wherein said first helmet air exit is disposed at said front section of said base section for distributing air from said air flow channel toward a front of the head of the user, and said second helmet air exit is disposed at said rear section of said base section for distributing air from said air flow channel toward a back of the head of the user.

108. A method for maintaining a constant volume of air flowing into an air filtration system during the entire use of the air filtration system, the air filtration system including a helmet assembly adapted to be mounted on a head of a user and a gown for covering the helmet assembly, wherein the helmet assembly of the air filtration system  
5 includes a fan, motor, and power supply, said method comprising the steps of:

selectively activating and deactivating the power supply at a first activation rate to distribute a required voltage to the motor thereby establishing a rotational speed for the fan that correlates to the constant volume of air flowing into the air filtration system;

monitoring the back electromotive force of the motor of the helmet assembly to  
10 determine the rotational speed of the fan and when the rotational speed of the fan has stabilized for a predetermined period of time;

monitoring the voltage of the power supply after the rotational speed of the fan has stabilized for the predetermined period of time; and

selectively activating and deactivating the power supply at a second activation  
15 rate as the monitored voltage of the power supply decreases thereby sustaining the required voltage being distributed to the motor such that the constant volume of air flowing into the air filtration system is maintained.



109. An air filtration system for filtering air between a head and body of a user and an environment external to the user, said air filtration system comprising:

a helmet assembly adapted to be mounted on the head of the user and including a base section and a facial section, said base section of said helmet assembly further  
5 including an inner structural shell and an outer structural shell extending from said inner structural shell to define at least one air flow channel between said inner and outer shells for channeling the air about the head of the user;

a gown including a body portion for covering the body of the user and a head portion for covering said base section of said helmet assembly, said head portion of said  
10 gown operating as a filter medium to filter air between the user and the external environment;

a skirt removably attached to said body portion of said gown exclusively at a front of said gown; and

a fan module mounted to at least one of said inner and outer shells and including at  
15 least one air inlet and at least one air outlet, said fan module drawing air in through said at least one air inlet and distributing the air out through said at least one air outlet into said at least one air flow channel for distributing air about the head of the user.

110. A visual positioning system for assisting a single user in self-gowning as the user maintains sterility, said visual positioning system comprising:

a helmet assembly adapted to be mounted on a head of the user, said helmet assembly including a base section and a facial section extending from said base section to  
5 define a facial opening;

a gown including a body portion for covering at least a portion of the body of the user and a head portion for covering said base section of said helmet assembly;

a face shield mounted to said head portion of said gown to cover said facial opening thereby permitting the user to view through said head portion of said gown, said face shield  
10 including a first visual indicator on said face shield to enable the user to visually align said face shield with said helmet assembly; and

said base section of said helmet assembly including a second visual indicator positioned relative to said facial opening for alignment with said first visual indicator on said face shield to automatically center said face shield over said facial opening thereby  
15 assisting the single user in self-gowning while maintaining a relative position between said gown and face shield and said helmet assembly as the user maintains sterility.

111. A system as set forth in claim 110 wherein said first visual indicator is centered on said face shield and said second visual indicator is centered on said helmet assembly relative to said facial opening.

20 112. A system as set forth in claim 110 wherein said helmet assembly further includes an inner and an outer shell extending between front and rear sections of said base section.

113. A system as set forth in claim 112 wherein said second visual indicator is disposed on one of said inner and outer shell of said helmet assembly.

114. A helmet assembly adapted to be utilized with a visual positioning system having a gown and a face shield wherein said helmet assembly assists a single user in self-gowning as the user maintains sterility, said assembly comprising:

a base section;

5 a facial section extending from said base section to define a facial opening for receiving the face shield; and

said base section including a second visual indicator positioned relative to the facial opening, said second visual indicator of said base section being adapted to align with a first visual indicator of the face shield to automatically center the face shield over said facial  
10 opening thereby assisting the single user in self-gowning while maintaining a relative position between the gown and face shield and said base section as the user maintains sterility.

115. A helmet assembly of an air filtration system for mounting to a head of a user to distribute air about the head of the user, said assembly comprising:

an inner structural shell;

an outer structural shell extending from said inner structural shell to define at least one air flow channel between said inner and outer shells for channeling air about the head of the user;

a fan module mounted to at least one of said inner and outer shells and including at least one air inlet and at least one air outlet, said fan module drawing air in through said at least one air inlet and distributing air out through said at least one air outlet into said at least one air flow channel for distributing air about the head of the user; and

an integral power supply mounted to at least one of said inner and outer shells for powering said fan module.

116. An assembly as set forth in claim 115 wherein said integral power supply is a battery.

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